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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/043,151	01/14/2002	Alessandro Carrozzi	008788-038	5272

7590

06/03/2003

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EXAMINER

SHRIVASTAV, BRIJ B

ART UNIT

PAPER NUMBER

2859

DATE MAILED: 06/03/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/043,151

Applicant(s)

CARROZZI ET AL.

Examiner

Brij B Shrivastav

Art Unit

2862

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 February 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 39-49 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 39, 41-45, 48 and 49 is/are rejected.
- 7) ☒ Claim(s) 40, 46 and 47 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☒ Certified copies of the priority documents have been received in Application No. 09/412,636.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

Art Unit: 2859

1. Applicant's amendment dated February 25, 2002 has been received and entered.

Claims 39-49 are pending in the application.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2 Claims 39, 41, 44, 45, and 48 are rejected under 35 U.S.C. 102(b) as being anticipated by Carrozzi (US 5,986,531).

As regards to claim 39, Carrozzi teaches a nuclear magnetic resonance imaging machine (figures 1, 6-8), which has at least two plane surfaces delimiting a cavity for receiving a part of a patient (figures 6-8, numeral 5 and K). Further, Carrozzi teaches a magnet of the machine (figures 1, 6-8, numerals 1), which has at least one rigid and moveable shielding member made of electrically conducting material, and moveable to a position closing at least partially an open side of the cavity (figures 1, 6-8, numerals 9, 10, 18; columns 8 and 9, lines 54-67, 1-17).

As regards to claim 41, Carrozzi further teaches a C-shaped magnet structure including a closed side (figure 6). The shielding member of the magnet structure closes at least partly a side of the magnet structure which is substantially opposite to the closed side while leaving remaining sides of the magnet partly open (figures 1 and 6, numeral 18; columns 8 and 9, lines 54-67 and 1-17).

As regards to claim 44, Carrozzi further teaches the areas that the shielding member leaves at least partly open are closed by additional shields, which can be fastened and removed, and electrically connected to the shielding member (figures 1 and 6, numerals 9, 10 and 18).

As regards to claims 45 and 48, Carrozzi further teaches: a) C-shaped magnet defining the cavity, and having upper and lower horizontal poles interconnected by a vertical branch, and the rigid shielding member having U-shaped frame attached to hinging axis at the level of, and transverse to the magnet (figure 1, column 6, lines 9-52),

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 42, 43 and 49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Carrozzi (US 5,986,531) as applied to claim 39 above, and further in view of Aoki et al (US 6,313,632).

As regards to claims 42 and 43, Carrozzi further teaches: a) that the magnet has two opposite poles defining a cavity (figures 1, 6-8); b) the flexible shields are provided in an area between shielding members (figure 1, numeral 9); c) the shielding being electrically conductive and connected both mechanically and electrically to the rigid shielding (figure 1, numerals 7, 9 and 107; column 1, lines 21-25). Carrozzi does not teach: a) the magnet poles are connected only in several small areas and more than

one rigid shielding member is provided to cover the whole parameter of the cavity between the poles, and b) the shielding members are rigid and in non-electrical and non-mechanical contact with each other. Aoki et al teach: a) the magnet poles being connected only in several small areas (figures 1 and 11), and more than one rigid shielding member to cover whole parameter of the cavity between the poles (figure 2, numeral 26); b) the shielding members are rigid and in non-electrical and non-mechanical contact with each other (figures 1, 2, 6). It would have been obvious to one of ordinary skill in the art to combine teachings of Aoki et al with the teachings of Carrozzi to construct a more versatile magnetic resonance imaging device, where various body parts of the patient could be imaged with least imaging artifacts and at reduced cost.

Allowable Subject Matter

4. Claims 40, 46, and 47 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

5 This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

Art Unit: 2859

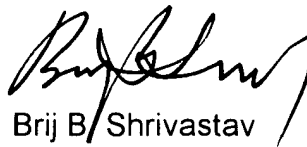
consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brij B Shrivastav whose telephone number is 703-305-0649. The examiner can normally be reached on 7 AM to 4 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Diego F.F. Gutierrez can be reached on 703-308-3875. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-7722 for regular communications and 703-304-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-0956.

Bbs
April 9, 2003



Brij B. Shrivastav
Patent Examiner